A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON HOME CARE MANAGEMENT OF PRETERM BABIES AMONG MOTHERS IN SELECTED HOSPITALS AT CHENNAI.

By

Arifa Bee.S

A dissertation submitted to

THE TAMILNADU DR.MGR MEDICAL UNIVERSITY, CHENNAI.

In partial fulfillment of the

REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN CHILD HEALTH NURSING,

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ABSTRACT

Introduction:-

Preterm babies are vulnerable to many kind of problems so home care management of preterm babies most which includes thermoregulation, breast feeding, immunization, umbilical cord care, growth & development & prevention of infection.

Aims:

(a) To assess the knowledge of home care management of preterm babies. (b) To determine the video assisted teaching on home care management of video assisted teaching or home care management of preterm babies. (c) To associate the knowledge with demographic variables.

Methodology:

A quasi experimental study was conducted to assess the effectiveness of video assisted teaching on home care management of preterm babies among mothers in which pretest – posttest only design was used. Samples were selected by non probability convenient sampling as per inclusion criteria at KKCTH at Nungambakkam and Dr. Mehta's hospital at chetpet and assigned as experimental & control group. The data was collected using a self structured questionnaire by the investigator and analysed using mean, standard deviation, paired 't' test, chi- square test.

Results:

A total of 60 samples (mothers) were included in the study, out of which 27 (90%) had adequate knowledge. The calculated 't' value 15. 402 shows statistically high significant difference in the level of knowledge at $P<0.001$ level in the

experimental and control group and only the educational status of the mothers showed association with the knowledge.

Conclusion:

There by the investigator concludes that the video assisted teaching o home care management of preterm babies as an effective method for improving knowledge of mothers. Thus it encompasses commitment by Paediatric nurse creating a wonder in paediatrics.

CHAPTER – I
INTRODUCTION

"A baby will make love stronger, days shorter, nights longer, bankall smaller, home happier, clothes Shabbier, the past forgotten, and the future worth living for".

(-GeorgeCarlin. 1937)

The shorter the term of pregnancy the greater the risks of mortality and morbidity for the baby. Premature – Preterm babies ("Preemies" or premmies") have an increased risk of death in the first year of life (infant mortality) with most of that occuring in the first month of life (neonatal mortality). World wide, prematurity accounts for 10% of neonatal mortality, or around 5, 00,000 deaths per year. 25% Prematurely born infants are at greater risk for having subsequent serious chronic health problems.

Less than 37 weeks gestation, a "premature" infant is one that has not yet reached the level of fetal development that generally allows life outside the womb. Over the last 40 years the NICU care has improved,so the viability has reduced to approximately 24 weeks, although rare survivors have been documented as early as 21 weeks. Risk for preterm birth includes low BMI, poor nutritional status in diabetes, uterine malformations, and hypertension. Women with a previous preterm birth area at higher risk rate of 15-50%.

Thermoregulation is maintained by skin to skin contact which simply means having the baby undressed next to bare chest. Complications of hypothermia includes, hypoglycemia, hypoxia, weight loss, metabolic acidosis, peripheral vasoconstriction, CNS depression.

Premature babies often have problems on latching. Colostrum is the first milk which is thick, rich and concentrated.

Babies born very early may have disorganized sucking patterns and they are easily fatigued, posing breastfeeding problems. Breast milk provides many important nutrients with human milk fortifiers. When the mother is feeding breast milk, it will help to develop immunity faster. Mother should wipe the breast with boiled water before each feed which prevent infection in the preterm baby.

The umbilical cord usually falls off in 10 days to 3 weeks. Pus draining umbilicus indicates omphalitis because of the application of turmeric powder & cowdung on the umbilicus of the preterm baby.

Maturation of immune response begins with exposition to environmental antigens. Premature infants have an increased risk of experiencing infectious diseases. Premature infants must be vaccinated at 2 months of age, whatever the gestational age. Acellular pertussis vaccine and pneumococcal conjugate vaccine must be given as early as possible, at two months of age.

There are physical, behavioural, and emotional and intellectural milestones that most babies tend to reach within a certain time frame. A premature infant development may be slower than babies who were born full-term. Growth may be affected by poor feeding and nutrition problems. Babies born too early may have problems with sucking , swallowing, and controlling their tongue. If these problems are not managed, baby’s body may have a hard

time growing, skills such as sitting, walking, running, and talking may develop later.

The infant is very vulnerable to infection because the skin is immature and easily traumatized, thus weakening the defense against pathogens. The baby also has a lower resistance to infection because of a white blood cell count that is lower than the term infant.

BACKGROUND OF THE STUDY

Karen M. Edmond et al., (2011) states that Promotion of early initiation of breastfeeding has the potential to make a major contribution to the achievement of the child survival. 16% of neonatal deaths could be saved when infants were breastfed from 1st day. Breastfeeding- promotion programs should emphasize early initiation as well as exclusive breastfeeding

Aimin Chen and Walter J. Rogan. (2004) states that breastfed infant in the United States have lower rates of morbidity, especially from infectious disease. Longer breastfeeding was associated with lower risk of infectious diseases. Breastfeeding is associated with a reduction in post neonatal death.

Anna M. Dusick et al., (2003) states that postneonatal growth failure is extremely common in the very low birth weight and extremely low birth weight infant. Recent data from the national institute of child and human development (NICHD) indicates that 16% of extremely low birth weight infants are small for gestational age at birth, by 36 weeks, 89% have growth failure. Follow-up at 18 to 22 months says that 40% have weights, lengths,

and head circumferences less than the 10th percentile. Growth failure is associated with an increased risk of poor neurodevelopment outcome.

Cesar G.Victora et al., (1999) states that in premature babies lack of breast-feeding appear to be important risk factors for childhood pneumonia, and nutritional interventions may have an effect in reducing deaths from pneumonia.

S.L.Kaushik et al., (1995) states that preterm babies accounted for 13.2% of the live births and 69.9% of neonatal deaths. The cause of neonatal deaths found were infections(23.3%), immaturity (17.8%), hypothermia (9.6%).

Home care management of preterm babies includes thermoregulation, breast feeding, umbilical cord care, immunization, growth and development and prevention of infection.

NEED FOR THE STUDY

Wong – (2009) states that the actual cause of prematurity is not known in most instances. The incidence is highest in the lower socioeconomic class. Reflex activity is only partially developed, sucking is absent, week, or ineffectual, swallow, gag and cough reflexes are absent or week, other neurologic signs are absent or diminished, physiologically immature, unable to maintain body temperature, have limited ability to excrete solutes in the urine, & have increased susceptibility to infection. Women with polyhydraminos, oligohydramnios, anxiety, depression, tobacco, cocaine, consuming alcohol during pregnancy, abused pregnant women are risk to get

preterm babies. Infection play a major role in the genesis of preterm birth and may account for 25 – 40% of events.

Robert M.Kliegman et.al.,-(2006) states that IUGR is the most common cause of LBW. Prematurity may be caused by spontaneous labour (50%), spontaneous rupture of membranes (25%), or premature delivery for maternal or fetal indications (25%). Immaturity and infection are common cause for death in preterm babies.

Advances in Neonatal care - (2011) states that Cold stress is more common cause of death in neonate. 46.6% having less than 36 °C temperature. It is essential that preterm infants should be cared in environment that prevent heat loss to improve thermoregulation.

Jay E Lawn et al., (2003) states that KMC substantially reduces neonatal mortality amongst preterm babies (birth weight < 2000 g) in hospital, and is highly effective in reducing severe morbidity, particularly from infection.

Australian breast feeding Association (2011) states that the kangaroo care is the method of interaction with a premature baby to increase the mother's expressed breast milk supply by an average of 50%. The baby also shows an improved suckling ability, which is due to the stimulation of being near to mother's breasts.

Jack Newman and Edith Kernerman (2009) states that factors affecting the maintenance of breast feeding in preterm babies includes-

incubators, need of fortifiers, and exclusive breast milk till they attain 34 weeks of gestation.

Kelly Evens (2004) states that natural drying is a safe and effective means of umbilical cord care in preterm infants.

Aygun. C. Subatfi (2005) states that the effect of antibiotic, phototherapy and parental nutrition affect the umbilical cord separation. But the dry cord care will not increase the risk of omphalitis in preterm babies.

C.Marry Healy (2010) states that the development of a safe and effective childhood immunization schedule has effectively reduced morbidity and mortality from vaccine-preventable diseases (VPDs). VPDs are particularly severe in young infants, especially preterm (gestational age <37 weeks) or low birth weight (<2,500 g) infants. Studies demonstrate that vaccines are safe and immunogenic in preterm infants.

The children's Hospital of Philadelphia- (2010) states that vaccines should be given according to a baby's chronologic age. At 2-month babies require vaccination against diphtheria, tetanus, pretussis, polio, haemophilus influenza type b, pneumococcus, and rotavirus.

Very Low Birth Weight baby and Extremely Low Birth Weight baby are at high risk for cerebral palsy, developmental delay, mental retardation, visual problems (including blindness), hearing impairment and chronic lung disease. Deficits include deficient cognitive development, cerebral palsy and visual and auditory deficits. Attention deficit hyper activity disorder (ADHD) was found in 8 – 9% of the preterm children.

The investigator felt that there is inadequate knowledge for mothers of preterm babies at home. Because of false beliefs and unhygienic practices the preterm is prone to many diseases. So the investigator was interested in conducting a study for improving the knowledge of mothers on home care management of preterm babies.

STATEMENT OF THE PROBLEM

"A quasi experimental study to assess the effectiveness of Video Assisted Teaching on home care management of preterm babies among mothers in selected hospitals at Chennai."

OBJECTIVES

1) To assess the level of knowledge on home care management of preterm babies before video assisted teaching in experimental and control group

2) To determine the effectiveness of video assisted teaching on home care management of preterm babies in experimental group.

3) To find out the association between the level of post test knowledge scores on homecare management of preterm babies with selected demographic variables between experimental group.

HYPOTHESIS

1) There is significant difference in the post test level of knowledge on home care management of mothers with preterm babies between experimental & control group.

2) There is significance association between post test level of knowledge in experimental and control group with the selected demographic variables.

OPERATIONAL DEFINITIONS

1) ***Effectiveness:*** It refers to the outcome of video assisted teaching in terms of home care management of preterm babies.

2) ***Video Assisted Teaching:*** The teaching material designed to impart knowledge regarding home care management of preterm babies

3) ***Home care Management:*** It includes thermo regulation, breast feeding, umbilical cord care, immunization, growth and development and prevention of infection to preterm babies.

4) ***Preterm babies:*** A baby born before 37 completed weeks of gestation.

5) ***Mother:*** The mother who delivered the baby less than 37weeks of gestation.

ASSUMPTIONS

The study assumes that:

1) The mothers of preterm babies have inadequate knowledge regarding home care management of preterm babies.

2) The mothers of preterm babies gain adequate knowledge after the video assisted teaching programme.

3) The knowledge of the mothers of preterm babies is influenced by their demographic variable like, birth weight, gestational age of the baby at birth and order of preterm baby, age, educational status, type of family, income, occupation, place of residence, previous exposure to care of preterm babies.

LIMITATIONS

The study is limited to:-

1) Data collection period is limited to six weeks.

2) Sample size is limited to 30.

PROJECTED OUT COME

1) The results of this study will help the mothers of preterm babies to gain adequate knowledge in home care management of preterm babies & produce healthy infants to the world.

2) The video assisted teaching programme will be the most beneficial to mothers in caring preterm babies, improving skills in maintaining thermoregulation, breast feeding, immunization, umbilical cord care, growth and development and prevention of infection.

HUMAN RIGHTS PROTECTION

1) Ethical clearance was obtained to conduct the study from ethical committee.

2) Formal permission was obtained from hospital management.

3) Verbal consent was obtained from study samples.

CONCEPTUAL FRAMEWORK

The conceptual framework selected for this study is based upon the general systems theory developed by Von Ludwig bertalanfy (1968).

According to general system theory a system is a set of components or units interacting with each other within a boundary that filter the kind and the safe of blow of inputs and outputs to and from the system.

Systems can be open or closed. Open system are open for exchanges of matter, energy and information with their environment from which the system recover input & gives back output in the from of matter, energy and information.

Systems theory is concerned with the changes due to interaction between the various factors in a situation. The 5 components of system theory is

- Input
- Throughput
- Output
- Evaluation and
- Feed back.

INPUT

It is any type of information energy and material that enters the system from environment through its boundaries. In this study input is assessment of

knowledge of mother on home care management of preterm babies that includes thermo regulatation, breast feeding , umbilical cord care, immunization, growth and development and prevention of infection

THROUGHPUT

It is a process that allows the input to be charged so that it is useful to the system. In the study the throughput is providing information through video assisted teaching on home care management (thermoregulation, breast feeding, and umbilical cord care, immunization, growth and development and prevention of infection) to the mothers of preterm babies.

OUTPUT

It is any information, energy and material that leave the system and enters the environment through system boundaries. It is varying widely depending on the type and purpose of the system and effectiveness of actual input. In this study, the output is giving post test given to mothers of preterm babies on home care management of preterm babies.

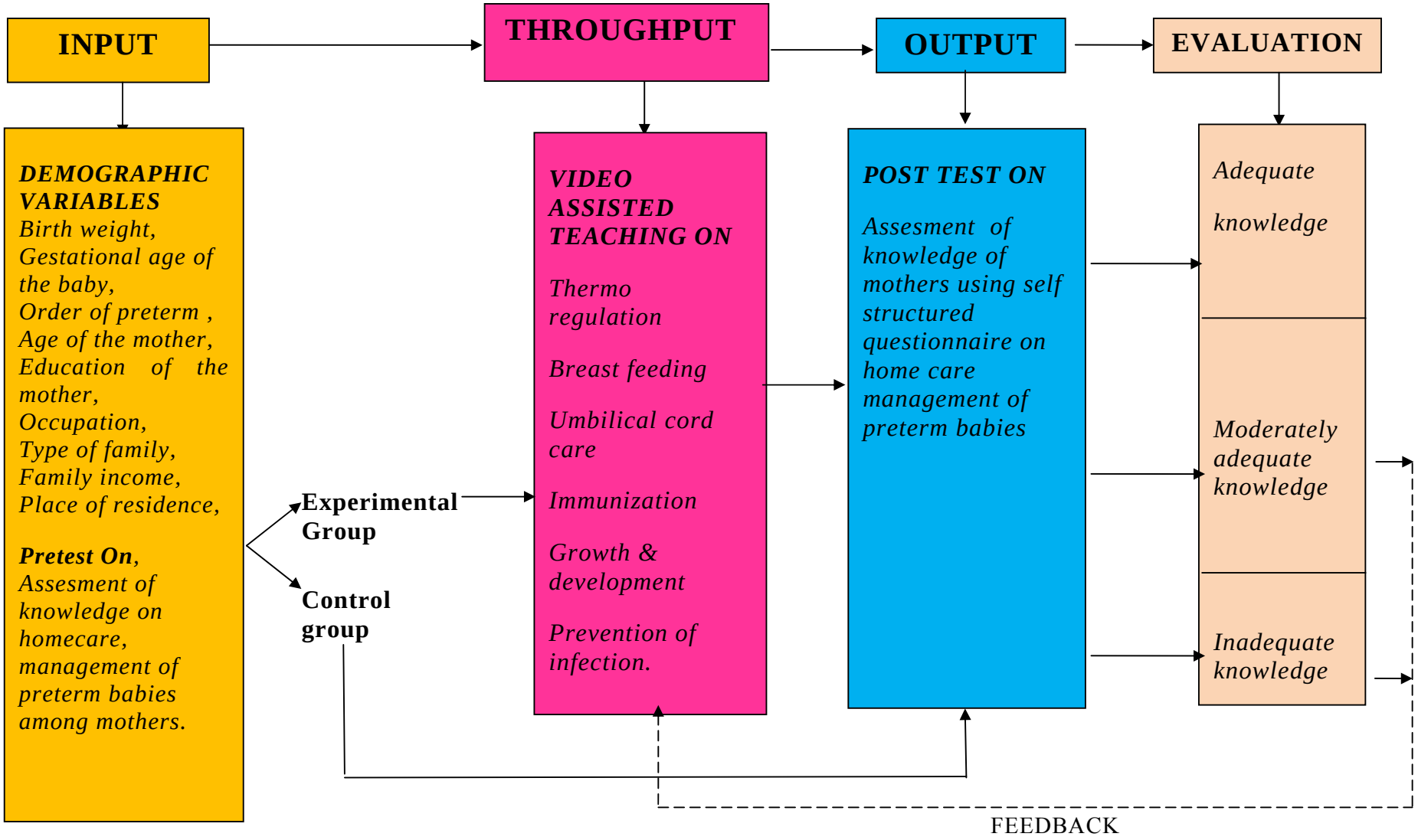
EVALUATION

It is another component of a system which means measuring the success or failure of the output and consequently the effectiveness of video assisted teaching on home care management of preterm babies among the mothers of preterm babies. The mother who have scroed >75% have adequate knowledge, 50-75% have moderately adequate knowledge and < 50% have scored inadequate knowledge.

FEEDBACK

It is the information given back to the system to determine whether the purpose or end result of the system has been achieved. In this study, feedback monitors the adequacy of input and changes in throughput. The functioning of open living system is cyclical which changes constantly. Follow up is must for mothers who had inadequate knowledge and moderately adequate knowledge regarding home care management of preterm babies. Feedback strengthens the Throughput.

fig.1: Conceptual frame work – modified Ludwig von bertalanfy general system theory



CHAPTER-II
REVIEW OF LITERATURE

Review of literature is one of the major content of the research study. A literature review in the present study was not documented on a bigger scale. However, an attempt made to bring out the available literature related to research process.

REVIEW OF LITERATURE CONTAINS TWO PARTS

Part 1:- Literature related to the home care management of preterm babies.

Part 2:- Studies related to preterm care

PART-1: LITERATURE RELATED TO THE HOME CARE MANAGEMENT OF PRETERM BABIES.

Part-1:- The delivery of a baby prior to full term is called preterm baby. A birth is generally considered premature if it occurs more than three weeks before the due date but after the period of viability (20 weeks or 500g). A premature birth reduces the amount of time to survive. So a proper home care management is need to take care of the preterm baby.

The home care management of preterm babies includes thermoregulation, breast feeding, umbilical cord care, immunization, growth & development and prevention of infection.

THERMOREGULATION

Kangaroo care

Kangaroo care is offered to a stable premature baby, usually few hours a day, and sometimes for much longer period of time. It is called skin-to-skin contact. The baby, wearing only a nappy and a hat, is placed against the mother's skin underneath her clothing, as it has unrestricted access to the mothers breasts. A baby cared for in this way maintains its body temperature, conserves energy (because these babies cry less & sleep more), and can often begin breast feeding much earlier than a baby cared for in the traditional manner. Father can also be involved in kangaroo care by this skin-to-skin contact with their premature baby.

Mummifying the baby

- Mummifying the baby promote warmth a wet diaper causes hypothermia and urinary tract infection.

Bath

Long term exposure of preterm baby during bath leads to chills.

Sponge bath can be given daily until;

- The umbilical cord falls of (10 days to 3 weeks)
- The circumcision heals (1-2weeks)
- The naval heals completely (1-4weeks).

Complications of hypothermia

- Hypoglycemia.

- Hypoxia.
- Weight loss.
- Metabolic acidosis.
- Peripheral vasoconstriction.
- CNS depression.
- Potential cold stress (36°C - 36.5°C)
- Temperatures more than 37.5°C may lead to vasodilatation, tachycardia, lethargy & apnea.

BREAST FEEDING

Feeding is an important aspect in life. It must meet the psychological, nutritional and emotional needs of the preterm baby. Human milk is the best milk for feeding preterm babies. Breast feeding should be recommended for the first 6 months to 12 month.

Advantages of breast milk

- Colostrum consist of more antibodies, proteins and immunoglobulin that protects against infection.
- Breast milk protect against gastroenteritis.
- Breast milk fed babies have less chances of allergy.
- It is available at right temperature.
- It is aseptic and uncontaminated.

- It is readymade, fresh and pure requiring no preparations.
- It is economic and inexpensive to the individual, family and community.
- Helps to establish mother child relationship.
- Helps the mother as a temporary family planning measure.

Duration of breast feeding

- Generally, babies need to eat 8 to 12 times within 24-hour period,
- The mother should feed the baby immediately the baby wakes upon.
- The mother should give a demand feeding.
- Urination for more than six times perday, weight gain and good sleeping indicates the adequacy of breast milk supply.

Expressed breast milk

- Expressed breast milk can be spoonfed to the baby if the baby is having low sucking and swallowing reflex.
- Premature babies often have problems in latching on and breast feeding properly. So, it is important that the mother should pump or hand express for every three hours to stimulate and maintain her milk supply until her baby is feeding more effectively. Make the baby to nurse about 10-15 minutes at each breast.

Burping

- Babies often swallow air during feeding, which can make them furry. It can be prevented by burping baby.

- The mother should burp the baby every 2-3 hours and each time after feeding.

Positions for breast feeding

Cradle position

Pillow two should be placed in mothers lap to support baby so its head is with the mother's nipple. Head resting on the mother's forearm near the elbow and hand holding the bottom. The mother uses the opposite hand to support the breast.

Cross-cradle position

Raise baby's head up with the nipple. The hand closest to head supports the breast in a U shape. The opposite hand supports baby's neck; the fingers and thumb make a "hammock" for baby's ears and neck, mothers palm rests between his shoulder blades.

Foot ball / Clutch position

A pillow placed at the side of the mother to support mothers arm and the baby. Baby's bottom rests on the pillow, and legs are tucked up, so the baby can't push off of the back of the chair while the mother nurse. .

Football hold is a good position after a cesarean; it's also good for large-breasted women.

Side-lying

The mother should lie on the side with a pillow on her back.

Vary position

Changing positions will help the mother to build the best milk supply & will help avoid clogged ducts & sore nipples.

IMMUNIZATION

Polio, measles, pestussis, diphtheria, tuberculosis & tetanus are diseases preventable by vaccine.

(AAP-2011)According to the standard schedule created by the American academy of pediatrics and other medical organizations worried that whether the recommendation were made with full term , normal weight babies in mind and whether the same guidelines apply to preterm's.

The hepatitis B vaccine should be given in the first hours or days of life. But if the baby weighs less than 2.2pounds(2000 grams) at birth, the paediatrician should decide to charge the timetable for the hepatitis B vaccine.

UMBILICAL CORD CARE

The preterm babies naval area should not be submerged in water until the cord stump falls off and the area is healed. The cord stump will change colour from yellow to brown or black.

- Sign of infection include a red or swollen at the base of the stump, yellow or white pus, a foul odor & painful.

GROWTH AND DEVELOPMENT

- Bonding, is one of the pleasurable aspects of infant care. Bonding and soothing technique promotes intelligence, physical and psychological growth.
- Preterm babies mostly affected with attention deficit hyperactive disorder.
- Intrauterine growth restriction may be very important in terms of early growth of the brain, leading to poor IQ and developmental skill

Milestones of premature babies:-

- 1 Month : Makes fists.
- 3 Month : Imitates sounds.
- 7Month : Sits up, responds to name.
- 1st year : crawls, says “mama”
- 2nd year : walks, uses simple phrases.

PREVENTION OF INFECTION

Restriction of Visitors

Restrict visitors from meeting the preterm child until it is two or three month old.

Hygiene

The mother should wash her hands before handling the baby. The mothers should wipe the breast with a warm water before feeding

Sterilization

All feeding equipment should be well sterilized before use. The feeding equipment should be boiled for 15-20min in boiled water. The feeding bottle and breast pump should be sterilized under boiling water.

PART-II: STUDIES RELATED TO MANAGEMENT OF PRETERM CARE

Waiswa.P, et al., (2010) reported about perceptions and care of preterm babies in eastern Uganda. Community members and community health workers accepted for skin-to-skin contact. The gaps in the community care is largely influenced by beliefs, perceptions & lack of awareness.

Lawn.JE. et al., (2010) reported about KMC to prevent neonatal deaths due to preterm birth complications. The study states hat KMC reduces neonatal mortality amongst preterm babies (birth weight less than 2000g) in hospital, & is highly effective in reducing severe morbidity, particularly from infections.

Suman.R.P, et al., (2008) reported about KMC for low birth weight infant . In low birth weight babies KMC reduces morbidities and improves growth. It can be continued by the mothers at home.

Ogunlesi.T.A, et al., (2008) reported about admission on hypothermia among Nigerian high risk babies. In high risk babies hypothermia has a poor outcome. Skin-to-skin contact & 'warm chain' contact between mother and baby promotes thermoregulation in high risk babies

Ramanathan.K.et al., (2001) reported about KMC in very LBW babies. The babies managed under KMC had gained better weight, earlier hospital discharge & higher exclusive breast-feeding rates. Kangaroo mother care is an adjunct to the routine preterm care in nursery.

Wagener.S. et al., (2009) reported about premature babies receiving fortified expressed breast milk. The milk curd obstruction should be considered in all premature infants with signs of bowel obstruction who were fed expressed breast milk with caloric fortification.

Ogechi.A.A, et al., (2007) reported about weight gain by hind milk in preterm and low birth weight babies. The hind milk had a higher rate in improving weight gain compared with those babies fed with composite milk. The duration of hospital stay of preterm low birth weight babies shortened because of the predominant use of hind milk.

Walker.M. (2008) reported about breast feeding to the late preterm infant. Late preterm will have disadvantages of feeding skills, stamina, risk to get hypoglycemia, hyperbilirubinemia and slow weight gain. Breast feeding of these babies are frustrating & difficult .Breast feeding management guidelines for late preterm infants will be beneficial.

Elliott.S.Reimer.C.(2006) reported about post discharge telephone follow-up program for breast feeding preterm infants is beneficial one after discharging them from a special care nursery

Aygun.C, et al., (2005) reported about umbilical cord separation lining & NICU practices. As the cord separation time in preterm babies was

longer. Antenatal corticosteroid & antibiotic use did not affect umbilical cord detachment time. Cord separation delayed in preterm babies because of the use of phototherapy, parenteral nutrition and postpartum antibiotics. Among these the most effective factor is antibiotic treatment. The risk of omphalitis is not increased by dry cord care in NICU patients.

Tavares.E.C, et al., (2005) reported about active & passive immunization in the extremely preterm infant. As the BCG vaccination, the tendency to maintain the same active immunization program as like babies born full term, irrespective of gestational age & weight at birth. Passive immunization merits special attention, with more liberal indications in this type of newborn babies.

Sood.A, et al., (2002) reported about Hepatitis B vaccine response in preterm babies. The birth weight of the baby had no independent influence on the antibody response. But the gestational age of the baby influence the antibody response.Hence, it is advisable to check antibody titers in preterm babies one month after the third dose of hepatitis B vaccine to assess the need for booster dose.

Amess.P, et al., (2010) reported about developmental outcome of very preterm babies using an assessment tool deliverable by health visitors. There was a severe developmental delay in motor function & language by 12 months. At 24 month assessment high level of mild to moderate developmental delay were identified.

Clarke.P. (2010) reported about vitamin k Prophylaxis for preterm infants .As vitamin k the most common 'drug' administered to babies born in the western countries. For the past many decades vit K prophylaxis has been a routine treatment at birth for preterm babies. Current regimens of prophylaxis used for preterm infants vary widely in terms of dose, route of administration, and formulations used.

Bertino.E, et al., (2010) reported about postnatal growth of preterm babies with reference charts. At present in clinical practice the available charts are fetal growth charts, neonatal anthropometric charts and postnatal growth charts. In Italy new Italian Neonatal study charts up to term, International longitudinal charts WHO 2006 or CDC 2002 from term to two years: & then the Italian society for paediatric endocrinology & diabetes 2006 growth charts are suitable for monitoring the growth of preterm babies from 2 years to 20 years of age.

Johnson.S, et al., (2005) reported about parental support for families with preterm children. The study indicates that the preterm babies have poorer cognitive, behavioral and motor functions at 5 years compared to their term peers.

Ganesan.K, et al., (2009) reported about the oral nystatin prophylactic administration for preterm infant under 33weeks of gestation decreases invasive fungaemia and fungal colonization.

Nuijlen.M.J, et al., (2007) reported about cost effectiveness of palivizumab for Respiratory Synciftial Virus prophylaxis in high-risk

children. The study indicates that palivizumab prophylaxis against RSV infection in higher risk children may be cost effective & the positive economical & clinical benefits may persists beyond one RSV season.

CHAPTER-III
RESEARCH METHODOLOGY

This chapter provides a brief description of the method adopted by the investigator to assess the effectiveness of video assisted teaching on home care management of preterm babies among mothers in selected hospitals at Chennai.

RESEARCH APPROACH

Quantitative approach

RESEARCH DESIGN

The research design is the over all plan for obtaining answers to the questions being studied and for handling various challenges to the worth of the study evidence.

In this study quasi experimental pretest - post test research design was used.

SETTING OF THE STUDY

The investigator conducted the study in NICU:-

1) KKCTH, Nungambakkam at Chennai. KKCTH is situated 8km away from MSAJ College of Nursing. The total bed strength of the hospital is 220. Facilities available are clinical lab, radiology, USG, OT. The NICU total bed strength is 35beds. The bed strength of the preterm baby is 8. Monthly census is 20-30 babies.

2) Dr.Mehta's hospital is situated 6 km away from MSAJ College of Nursing. The total bed strength of the hospital is 200. Facilities available are clinical lab, radiology, USG, labour room, OT. The NICU contains totally 30beds. The total bed strength of the preterm baby is 9. Monthly census of preterm babies is 20-30 babies.

3) Both the NICU has the facilities of ventilator, incubator, warmer, pulseoxymeter, suction apparatus.

This study was conducted among the mothers of preterm babies (born 32 - 37 weeks of gestation). The mothers were from christian, hindu and muslim religions.

POPULATION

All the mothers of preterm babies admitted in NICU of KKCTH and Dr.Metha hospital were the population of this study

SAMPLES

The total size of the study was 60 samples. Out of 60 samples; 30 mothers from KKCTH as experimental group & 30 mothers from Dr.Mehta hospital as control group.

SAMPLING TECHNIQUE

The investigator used non-probability convenient sampling technique for this study.

METHOD OF SAMPLE SELECTION

A sample of 30 mothers of preterm babies from KKCTH & 30 mothers of preterm babies from Dr.Mehta hospital were selected by using convenience

sampling technique. Each day three mothers of preterm babies who fulfilled the inclusion criteria were selected for the study.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1) Mothers of preterm babies who were admitted in the NICU of the KKCTH and Dr.Mehta's Hospital.

2) Mothers who can converse in English or Tamil.

Exclusion Criteria

1) Mentally disturbed mothers.

2) Care givers

3) Mothers who have previous knowledge about care of preterm babies.

4) Mothers who are not willing to participate.

5) Surrogate mothers

6) Mothers with post partum psychosis.

DESCRIPTION OF INSTRUMENT

A self structured questionnaire was used to assess the level of knowledge of mothers with preterm babies.

The research instrument consists of two sections.

Section-1: It deals with demographic data of the preterm baby and the mother.

Part- A: Preterm baby consists of age of the baby, weight of the baby & order of the birth.

Part-B: Mother consists of age of the mother, educational status of the mother, occupation, income of the family, type of family, place of residence and previous knowledge of mothers about home care management of preterm babies

Section 2: Assessment of knowledge was done by using self structured questionnaire which consist of thirty questions. The questions were related to thermoregulation, breast feeding, umbilical cord care, immunization, growth and development and prevention of infection.

THE TOOL AND SCORE INTERPRETATION

The self structured questionnaire consist of thirty multiple choice questions which has six components. The correct answers were given a score of 'one' and the wrong answers were marked as 'zero'. Data collection was done by using interview technique. Content validity was obtained from medical and nursing experts.

The scores were interpreted as follows:-

<50%	Inadequate Knowledge
50-75%	Moderately adequate knowledge
>75%	Adequate knowledge.

VALIDITY AND RELIABILITY

Based on the review of literature and expert guidance the self structured questionnaire was developed by the investigator.

For the content validity the tool was evaluated by the experts. By the test retest method the reliability of the instrument was established. In the test retest method positive significant was there {r=1}, that shows tool is highly reliable.

PILOT STUDY

Pilot study was conducted in KKCTH at Nungambakkam and Dr.Mehta's hospital at chetpet for a period of seven days from 7/3/2011 to 21/3/2011. The study was conducted among six mothers of preterm babies. Three mothers from KKTCH selected as experimental group and three mothers from Dr.Mehta's hospital as control group, who fulfilled the inclusion criteria, by using convenience sampling technique. Approximately 35-40 minutes were spent to collect data from each mother. Pretest was conducted, following that video assisted teaching program was given to the experimental group. Pretest was conducted but intervention not given to the control group. At that fifth day post test was conducted to both experimental and control group. Pamphlets containing home care management of preterm babies were distributed. The content validity was obtained from expert professors of college of nursing and consultant neonatologist.

During pilot study the validity and reliability of the instrument was checked. "r" value r=1. Based on the results of the pilot study the following changes were made:-

1) In the demographic data the previous knowledge of mothers about homecare management of preterm babies was included.

2) In questions No. 6 -all of the above changed in to minerals & question No. 26 -all of the above changed in to muscle growth.

DATA COLLECTION PROCEDURE

The objectives of the study were explained to nursing personnel. Data was collected for a period of 20-30 minutes. The main study was conducted from 04.06.2011 to 15.07.2011. To collect data a convenience sampling technique was used. Among 60 mothers of preterm babies, 30 from KKCTH and 30 from Dr.Mehta's hospital, who fulfill the inclusion criteria were selected for this study. Every day five mothers were selected for data collection. For each mother approximately 35 – 40 minutes spent to collect the data. A video assisted teaching programme was given for 30 minutes by using laptop in the mothers room. Comfortable seats were provided for the mothers to observe the video assisted teaching programme. Seventh day post test was conducted. At the end of the post test pamphlets on home care management of preterm babies were distributed to both experimental and control group. Twenty minutes was allotted for discussion. All the mothers of preterm babies were interested & co-operated well.

PLAN FOR DATA ANALYSIS

The responses were tabulated and each item was scored after pretest and post test.

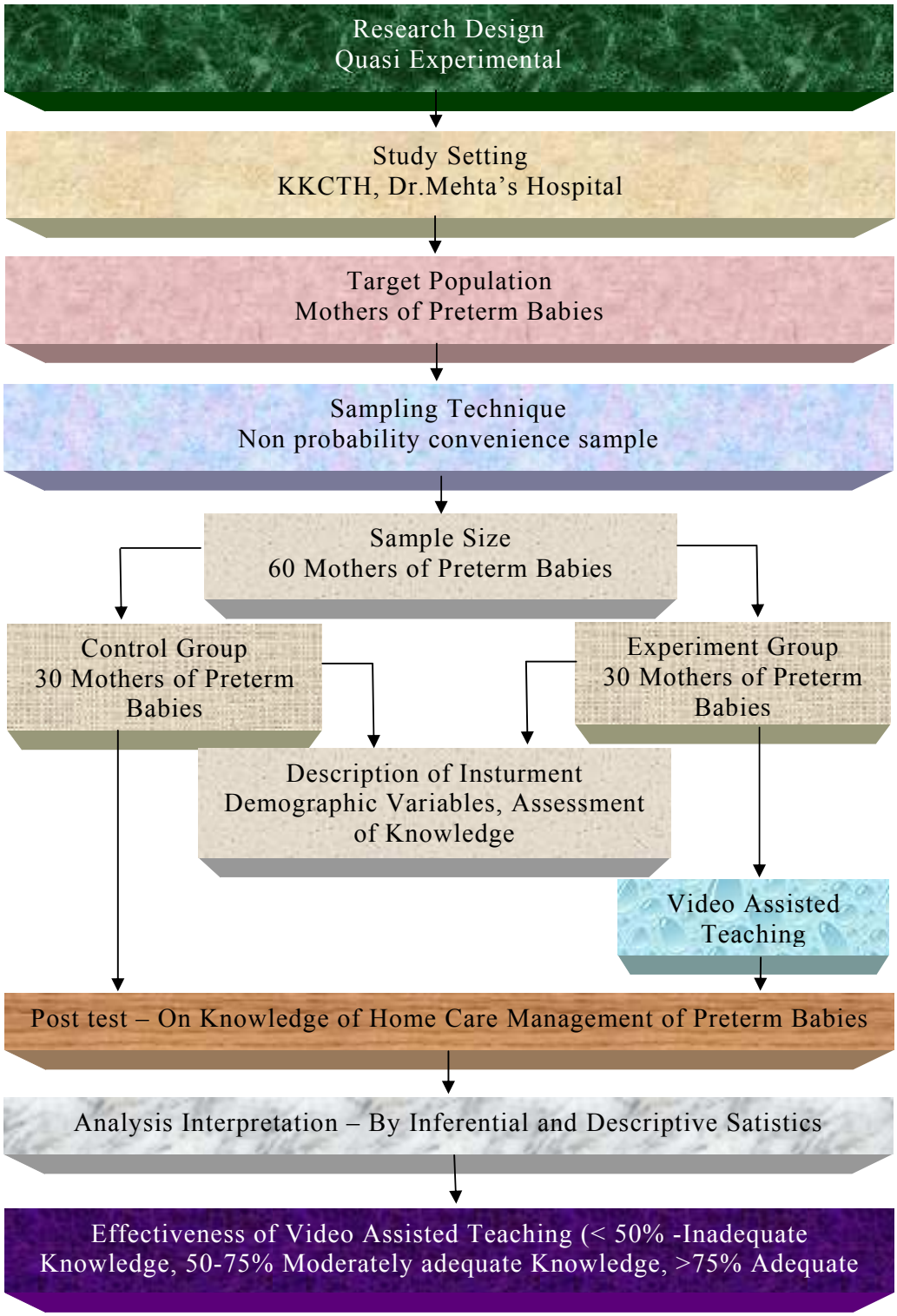
Mean, standard deviation, percentage distribution, paired" test student 't' test and chi-square test were used for the analysis for statistical method

DATA ANALYSIS AND STATISTICAL METHOD USED

Data was collected, tabulated and analyzed using statistical methods such as numbers, percentage, mean, standard deviation, paired 't' test, student 't' test and chi-square test.

S. No.	Objectives	Statistical Methods
1.	To assess the level of knowledge in mothers of preterm babies on home care management.	Descriptive Statistics - Numbers, Percentage, Mean and standard deviation.
2.	To evaluate the effectiveness between pre and post test knowledge in experimental and control group	Inferential statistics - Paired 't' test, student 't' test
	To analysis association between level of knowledge and demographic variables.	Inferential statistics - Chi-Square test

FIG-2: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



CHAPTER – IV
DATA ANALYSIS AND INTERPRETATION

This chapter deals with the data analysis and interpretation to assess the effectiveness of video assisted teaching on home care management of preterm babies among mothers in selected hospitals at Chennai.

Descriptive and inferential statistics were used for the analysis of the data. According to the study objectives the interpretation has been tabulated and organized as follows:

ORGANIZATION OF DATA

Section-A: **D**escription of demographic variables of mothers of preterm babies in the experimental and control group.

Section-B: **A**ssessment of pre and post test level of knowledge on home care management of preterm babies among mothers in the experimental and control group.

Section-C: Comparison of effectiveness of video assisted teaching on home care management of preterm babies among mothers in the experimental and control group.

Section-D: Association between the post test level of knowledge score on home care management of preterm babies among mothers with their selected demographic variables in the experimental group.

SECTION-A

Table-1: Frequency and percentage distribution of demographic variables of mothers of preterm babies in the experimental and control group.

N = (30)

S. No	Demographic Variables	Experimental Group		Control Group	
		No. n=30	**%**	**No. n=30**	**%**
1.	Birth Weight				
	2kg-2.5kg	19	63.33	18	60.00
	1kg-2kg	11	36.67	12	40.00
2.	Gestational age of the baby at birth				
	32 - 35 weeks	12	40.00	11	36.67
	36 - 37 weeks	18	60.00	19	63.33
3.	Order of Preterm				
	First	30	100.00	26	86.67
	Second	0	0.00	4	13.33
	Third and above	0	0.00	0	0.00
4.	Age of mother in years				
	<20 yrs	5	16.67	1	3.33
	21 - 30 yrs	23	76.67	21	70.00
	>30 yrs	2	6.66	8	26.67
5.	Educational Status of the mother				
	Illiterate	0	0.00	0	0.00
	Primary	4	13.33	2	6.67
	Higher Sec.	15	50.00	10	33.33
	Graduate	11	36.67	18	60.00
6.	Occupation				

S. No	Demographic Variables	Experimental Group		Control Group	
		No. n=30	%	No. n=30	%
	Homemaker	13	43.33	16	53.33
	Employed	17	56.67	14	46.67
7.	Type of family				
	Joint family	9	30.00	11	36.67
	Nuclear family	21	70.00	19	63.33
8.	Family Income				
	<Rs.3000	0	0.00	0	0.00
	Rs.3000 – 5000	0	0.00	0	0.00
	>Rs.5000	30	100.00	30	100.00
9.	Place of residence				
	Rural	10	33.33	4	13.33
	Urban	20	66.67	26	86.67
	Semi urban	0	0.00	0	0.00
10.	Previous exposure				
	Yes	0	0.00	1	3.33
	No	30	100.00	29	96.67

The table 1 shows that frequency and percentage distribution of demographic variables of the mother of preterm babies in the experimental and control group. With regard to birth weight of the preterm babies, majority 19(63.33%) were >2000gm in the experimental group and in the control group, majority 18(60%) were >2000gm. Regarding gestational age of the baby at birth, majority 18(60%) were between 36 – 37 weeks in the

experimental group whereas in the control group majority 19(63.33%) were between 36 – 37 weeks.

Considering the order of preterm babies in the experimental group, almost all 30(100%) were of first order and in the control group, majority 26(86.67%) were of first order of birth. The age of mothers in the experimental group, majority 23(76.67%) were in the age group of 21 – 30 yrs and in the control group, majority 21(70%) were in the age group of 21 – 30 yrs. On considering the educational status of the mother in the experimental group, majority 15(50%) had higher secondary education whereas in the control group, majority 18(60%) were graduates.

With Regard to occupation of the mother in the experimental group, majority 17(56.67%) were employed whereas in the control group, majority 16(53.33%) were homemakers. With regard to type of family in the experimental group, majority 21(70%) were from nuclear family and in the control group also majority 19(63.33%) were from nuclear family. Regarding the family income of the mothers, almost all 30 (100%) were earning >Rs.5,000 both in the experimental and control group. Regarding the place of residence, mothers in the experimental group and control group majority are from urban area.

Considering the previous exposure of the mothers in care of preterm babies in experimental group, almost all 30(100%) had no previous exposure and in the control group, majority 29(96.67%) had no previous exposure.

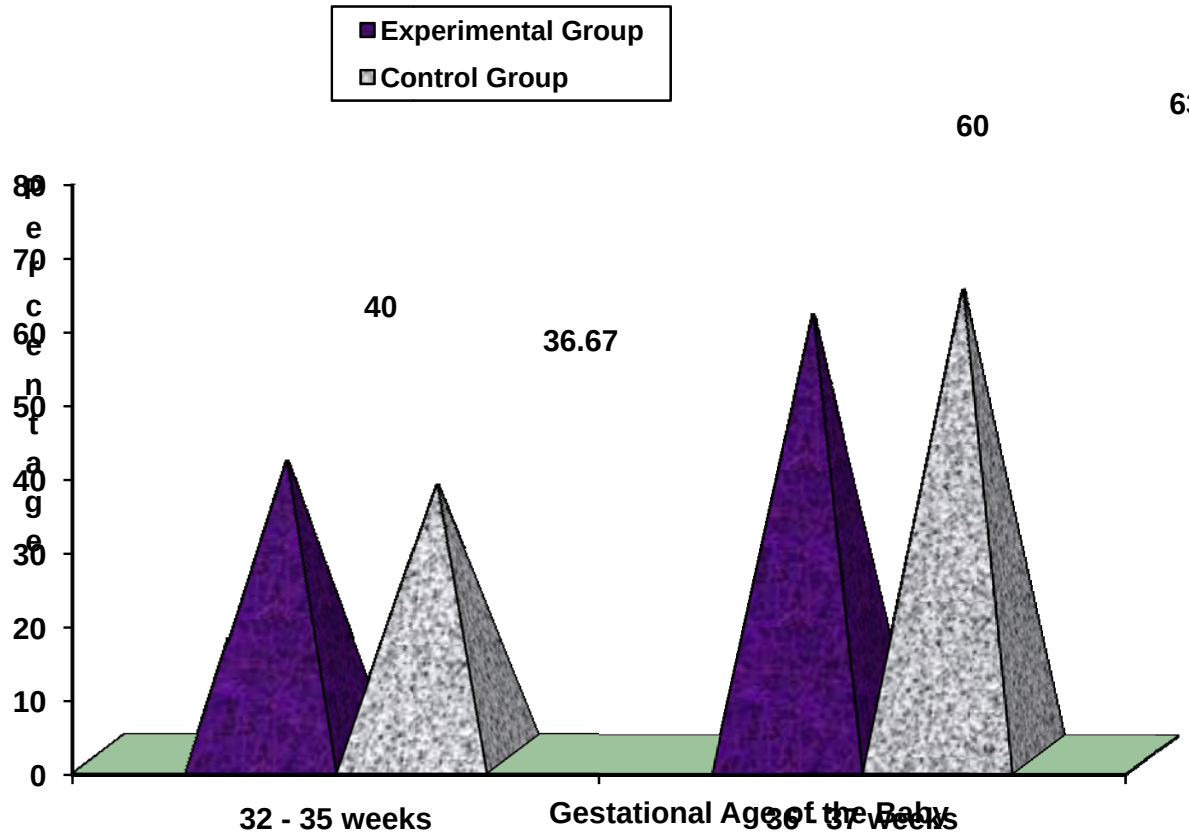


Fig.3: Percentage distribution of gestational age of the baby at birth in the experimental and control group

SECTION B

Table-2: Frequency and percentage distribution of pretest level of knowledge on home care management of preterm babies among mothers in the experimental group.

n = 30

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Thermoregulation	20	66.67	7	23.33	3	10.0
Breast feeding	24	80.0	6	20.0	0	0
Immunization	8	26.67	22	73.33	0	0
Umbilical Cord	18	60.0	12	40.0	0	0
Growth & Development	24	80.0	5	16.67	1	3.33
Prevention of Infection	16	53.33	6	20.0	8	26.67
Overall	27	90.0	3	10.0	0	0

The table 2 depicts the frequency and percentage distribution of pretest level of various aspects of knowledge on home care management of preterm babies among mothers in the experimental group. With regard to thermoregulation, majority 20(66.67%) had inadequate knowledge on home care management of preterm babies.

Regarding knowledge on breastfeeding, majority 24(80%) had inadequate knowledge, in immunization, 22(73.33%) had moderately adequate knowledge.

Majority 18(60%) had inadequate knowledge on umbilical cord care With respect to knowledge on growth and development, majority 24(80%) had inadequate knowledge. 16(53.33%) had inadequate knowledge on prevention of infection. The overall level of knowledge on home care management of preterm babies among mothers in the experimental group shows that majority 27(90%) had inadequate knowledge all the 6 aspects.

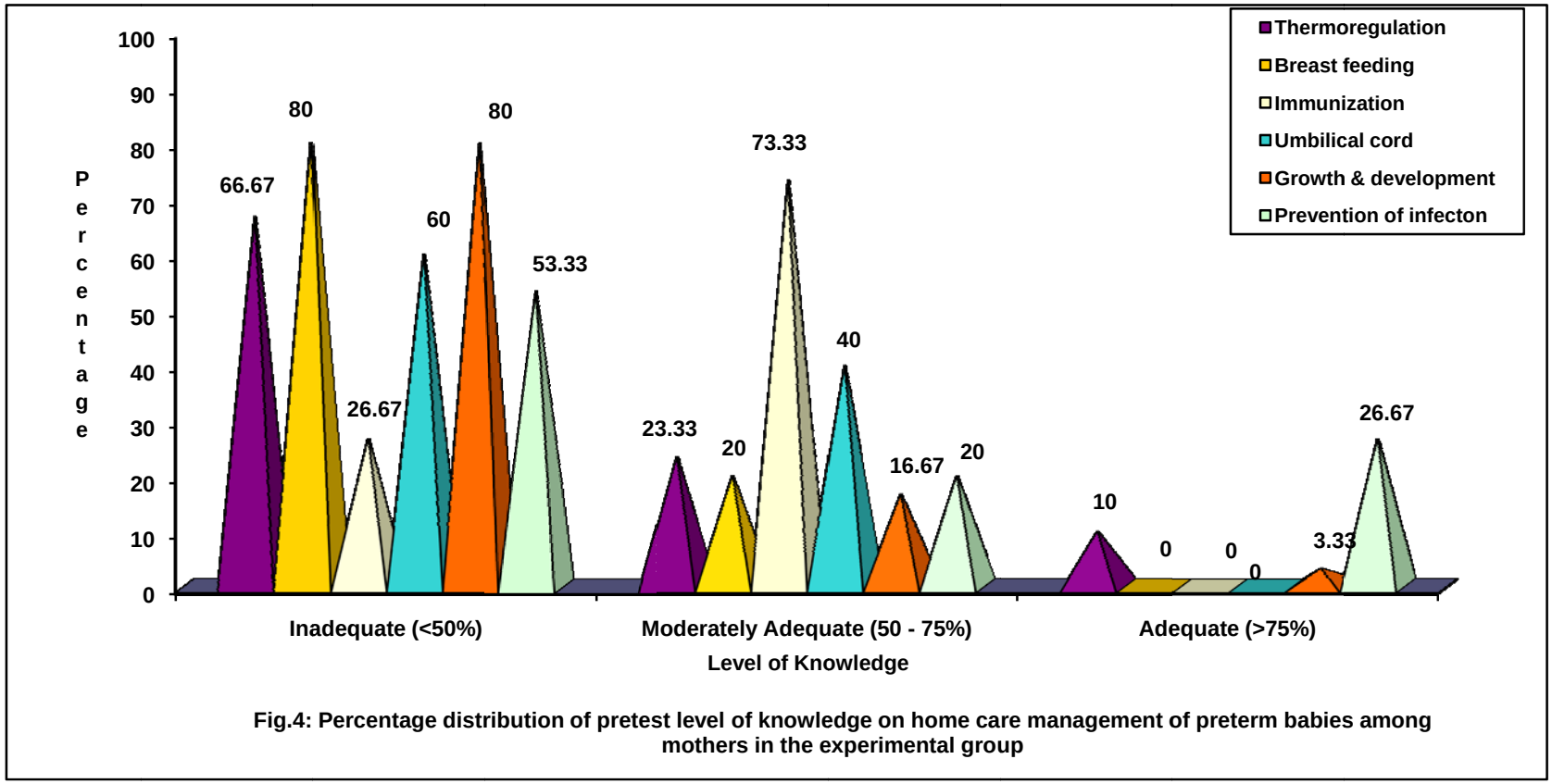


Fig.4: Percentage distribution of pretest level of knowledge on home care management of preterm babies among mothers in the experimental group

Table-3 : Frequency and percentage distribution of post test level of knowledge on home care management of preterm babies among mothers in the experimental group.

n = 30

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Thermoregulation	5	16.67	5	16.67	20	66.66
Breast feeding	0	0	5	16.67	25	83.33
Immunization	1	3.33	9	30.0	20	66.67
Umbilical Cord	0	0	11	36.67	19	63.33
Growth & Development	3	10.0	8	26.67	19	63.33
Prevention of Infection	6	20.0	1	3.33	23	76.67
Overall	0	0	2	6.67	28	93.33

The table 3 depicts the frequency and percentage distribution of post test level of various aspects of knowledge on home care management of preterm babies among mothers in the experimental group. Regarding thermoregulation, majority 20(66.67%) had adequate knowledge, in breastfeeding, majority 25(83.33%) had adequate knowledge. Considering the knowledge on immunization, majority 20(66.67%) had adequate knowledge in the post test.

Majority 19(63.33%) had adequate knowledge on umbilical cord care. In growth and development, majority 19(63.33%) had adequate knowledge. Knowledge on prevention of infection shows that majority 23(76.67%) had adequate knowledge in the post test. The overall level of knowledge on home care management of preterm babies among mothers in the experimental group shows that majority 28(93.33%) had adequate knowledge and 2% had moderately adequate knowledge.

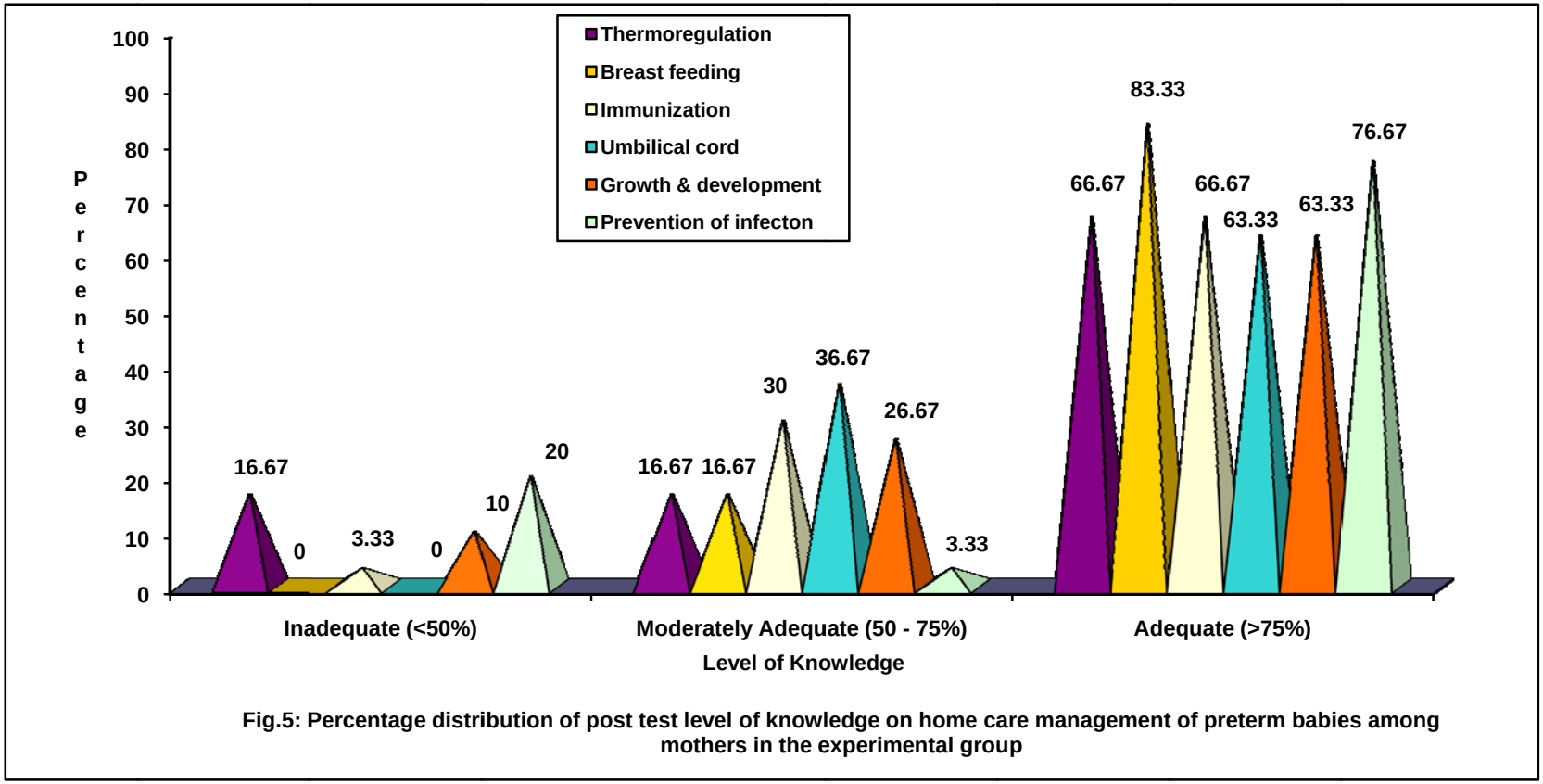


Fig.5: Percentage distribution of post test level of knowledge on home care management of preterm babies among mothers in the experimental group

Table-4: Frequency and percentage distribution of pretest level of knowledge on home care management of preterm babies among mothers in the control group.

n = 30

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Thermoregulation	25	83.33	2	6.67	3	10.0
Breast feeding	25	83.33	4	13.33	1	3.34
Immunization	17	56.67	6	20.0	7	23.33
Umbilical Cord	18	60.0	12	40.0	0	0
Growth & Development	23	76.67	3	10.0	4	13.33
Prevention of Infection	16	53.33	4	13.34	10	33.33
Overall	27	90.0	2	6.67	1	3.33

The table 4 depicts the frequency and percentage distribution of pretest level of various aspects of knowledge on home care management of preterm babies among mothers in the control group. With regard to thermoregulation, majority 25(83.33%) had inadequate knowledge, in breastfeeding, majority 25(83.33%) had inadequate knowledge.

Considering the knowledge on immunization, majority 17(56.67%) had inadequate knowledge.

Regarding umbilical cord care majority 18(60%) had inadequate knowledge. Regarding growth and development, majority 23(76.67%) had inadequate knowledge. Knowledge on prevention of infection shows that majority 16(53.33%) had inadequate knowledge. The overall level of knowledge on home care management of preterm babies among mothers in the control group shows that majority 27(90%) had inadequate knowledge in the pretest.

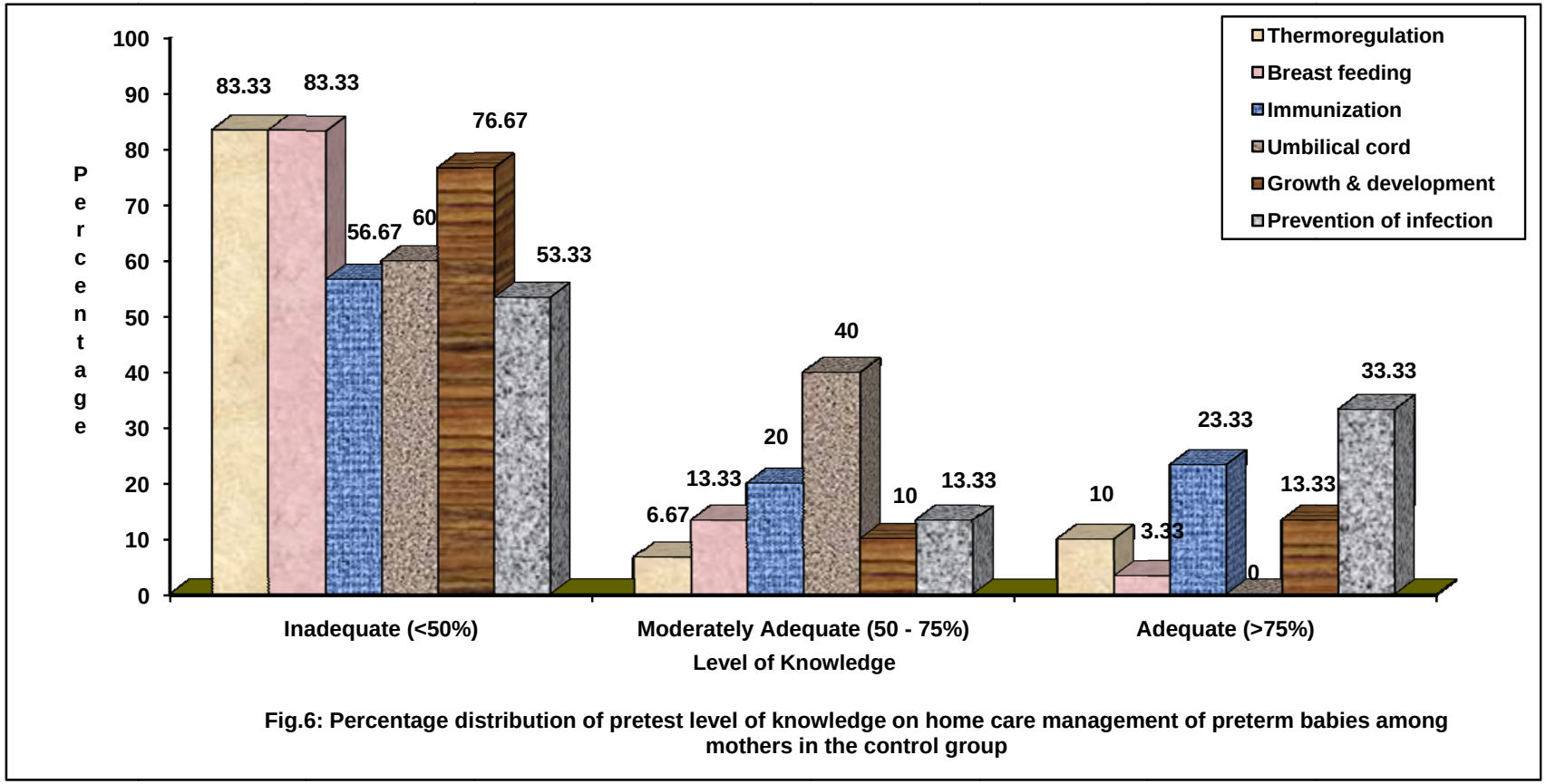


Fig.6: Percentage distribution of pretest level of knowledge on home care management of preterm babies among mothers in the control group

Table-5:Frequency and percentage distribution of post test level of knowledge on home care management of preterm babies among mothers in the control group.

n = 30

Knowledge Aspects	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Thermoregulation	21	70.0	6	20.0	3	10.0
Breast feeding	27	90.0	3	10.0	0	0
Immunization	22	73.33	6	20.0	2	6.67
Umbilical Cord	23	76.67	5	16.66	2	6.67
Growth & Development	24	80.0	4	13.33	2	6.67
Prevention of Infection	11	36.67	7	23.33	12	40.0
Overall	27	90.0	2	6.67	1	3.33

The table 5 depicts the frequency and percentage distribution of post test level of various aspects of knowledge on home care management of preterm babies among mothers in the control group. Regarding thermoregulation, majority 21(70.0%) had inadequate knowledge, in breastfeeding, majority 27(90.0%) had inadequate knowledge. Considering the knowledge on immunization, majority 22(73.33%) had inadequate knowledge in the post test.

On analysis of knowledge on umbilical cord reveals that majority 23(76.67%) had inadequate knowledge in the post test. With respect to knowledge on growth and development, majority 24(80.0%) had inadequate knowledge. Knowledge on prevention of infection shows that majority 12(40.0%) had adequate knowledge in the post test. The overall level of knowledge on home care management of preterm babies among mothers in the control group shows that majority 27(90%) had inadequate knowledge in the post test.

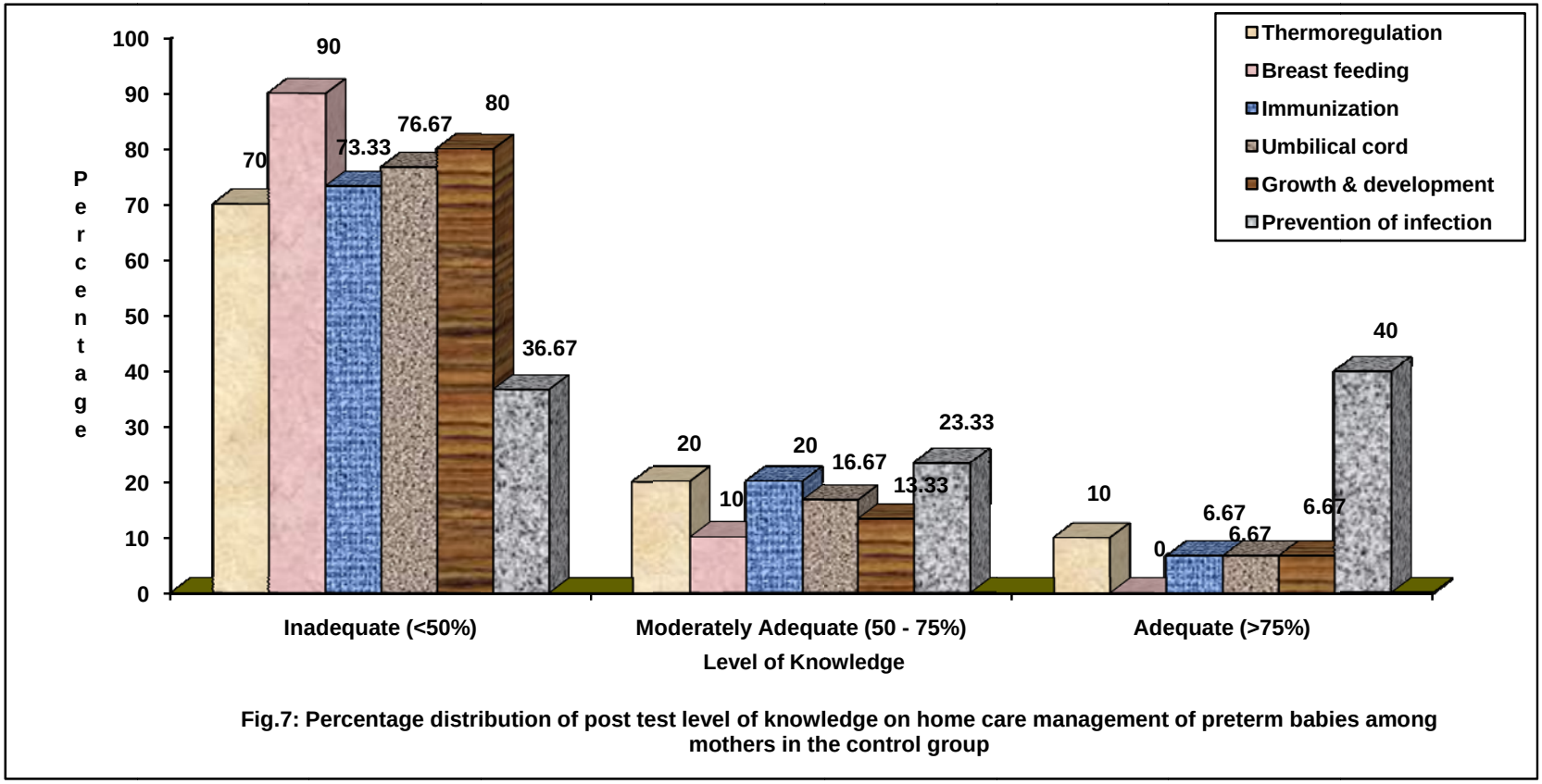


Fig.7: Percentage distribution of post test level of knowledge on home care management of preterm babies among mothers in the control group

Table-6: Mean and standard deviation of overall knowledge in the experimental group.

n = 30

Knowledge Aspects	Pretest		Post Test	
	Mean	**S.D**	**Mean**	**S.D**
Thermoregulation	1.73	1.34	3.90	1.30
Breast feeding	3.40	2.14	10.97	1.45
Immunization	2.10	0.96	3.50	0.90
Umbilical Cord	1.20	1.06	3.47	0.78
Growth & Development	1.03	0.72	2.53	0.68
Prevention of Infection	0.73	0.87	1.57	0.82
Overall	10.20	3.71	25.93	2.63

The table 6 depicts the mean and standard deviation of pretest and post test level of knowledge in the experimental group.

Thermoregulation

In the pretest, mean score was 1.73 with S.D 1.34 and in the post test the mean score was 3.90 with S.D 1.30.

Breast Feeding

In the pretest, mean score was 3.40 with S.D 2.14 and in the post test the mean score was 10.97 with S.D 1.45.

Immunization

In the pretest, mean score was 2.10 with S.D 0.96 and in the post test the mean score was 3.50 with S.D 0.90.

Umbilical Cord

In the pretest, mean score was 1.20 with S.D 1.06 and in the post test the mean score was 3.47 with S.D 0.78.

Growth and Development

In the pretest, mean score was 1.03 with S.D 0.72 and in the post test the mean score was 2.53 with S.D 0.68.

Prevention of Infection

In the pretest, mean score was 0.73 with S.D 0.87 and in the post test the mean score was 1.57 with S.D 0.82.

The overall analysis shows that the pretest mean score was 10.20 with S.D 3.71 and the post mean score was 25.93 with S.D 2.63. The mean value in post test 25.93 reveals that the mothers gained adequate knowledge in thermo regulation, breastfeeding, immunization, umbilical cord care, growth and development, prevention of infection in experimental group.

Table-7: Mean and standard deviation of overall knowledge in the control group.

n = 30

Knowledge Aspects	Existing		Post Test	
	Mean	**S.D**	**Mean**	**S.D**
Thermoregulation	1.20	1.47	1.70	1.37
Breast feeding	3.47	2.61	3.63	1.67
Immunization	1.50	1.59	1.07	1.26
Umbilical Cord	1.27	0.94	1.10	1.03
Growth & Development	1.03	1.00	0.93	0.87
Prevention of Infection	0.80	0.92	1.03	0.89
Overall	9.27	4.24	9.47	4.18

The table 7 depicts the mean and standard deviation of pretest and post test level of knowledge in the control group.

Thermoregulation

In the pretest, mean score was 1.20 with S.D 1.47 and in the post test the mean score was 1.70 with S.D 1.37.

Breast Feeding

In the pretest, mean score was 3.47 with S.D 2.61 and in the post test the mean score was 3.63 with S.D 1.67.

Immunization

In the pretest, mean score was 1.50 with S.D 1.59 and in the post test the mean score was 1.07 with S.D 1.26.

Umbilical Cord

In the pretest, mean score was 1.27 with S.D 0.94 and in the post test the mean score was 1.10 with S.D 1.03.

Growth and Development

In the pretest, mean score was 1.03 with S.D 1.00 and in the post test the mean score was 0.93 with S.D 0.87.

Prevention of Infection

In the pretest, mean score was 0.80 with S.D 0.92 and in the post test the mean score was 1.03 with S.D 0.89.

The overall analysis shows that the pretest mean score was 9.27 with S.D 4.24 and the post mean score was 9.47 with S.D 4.18. The mean value in post test score 9.47 reveals that mothers had inadequate knowledge in control group.

SECTION C

Table-8 : Over all mean score of overall knowledge on home care management of preterm babies among mothers in the experimental group.

n = 30

Knowledge	Mean	S.D	't' Value
Pretest	10.20	3.71	15.402***
Post Test	25.93	2.63	p = 0.000 (S)

***p<0.001, S - Significant

The table 8 shows that the pretest mean score was 10.20 with S.D 3.71 and the post test mean score was 25.93 with S.D 2.63. The calculated 't' value of 15.402 was found to be statistically highly significant at p<0.001 level. This implies that the video assisted teaching on home care management of preterm babies given to mothers in the experimental group had significant improvement in their knowledge. increased in the.

Since, the obtained "t" value was higher than the table value, the above findings accepts the research hypothesis(H_1).

Table-9: Comparison of over all knowledge on home care management of preterm babies among mothers in the control group.

n = 30

Knowledge	Mean	S.D	't' Value
Pretest	9.27	4.24	-1.989
Post Test	9.47	4.18	p = 0.056, (N.S)

N.S – Not Significant

The table 9 depicts that the pretest mean score of knowledge was 9.27 with SD 4.24 and the post test mean score was 9.47 with S.D 4.18. The calculated 't' value of -1.989 was not found to be statistically significant. This implies that there is no improvement in the post test level of knowledge in the control group.

Table-10: Comparison of post test level of knowledge on home care management of preterm babies among mothers between the experimental and control group.

N = 60

Group	Mean	S.D	Unpaired 't' Value
Experimental Group	25.93	2.63	18.262***
Control Group	9.47	4.18	p = 0.000, (S)

***p<0.001, S – Significant

The table 10 depicts that in the experimental group the post test mean score of knowledge was 25.93 with S.D 2.63 and in the control group the post test mean score was 9.47 with S.D 4.18. The calculated 't' value of 18.262 was found to be statistically highly significant at p<0.001 level. This shows that the video assisted teaching on home care management of preterm babies given to mothers in the experimental group had significant improvement in knowledge when compared to control group.

SECTION D

Table-11: Association of post test level of knowledge on home care management of preterm babies among mothers with their demographic variables in the experimental group.

n = 30

S. No	Demographic Variables	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)		Chi-Square Value
		No.	%	No.	%	No.	%	
1,	Birth Weight							χ^2 = 1.241
	2kg-2.5kg	-	-	2	6.7	17	56.7	d.f = 1
	1kg-2kg	-	-	0	0	11	36.7	p = 0.265 N.S
2.	Gestational age of the baby at birth							χ^2 = 1.429
	32 - 35 weeks	-	-	0	0	12	40.0	d.f = 1
	36 - 37 weeks	-	-	2	6.7	16	53.3	p = 0.232 N.S
3.	Order of Preterm							
	First	-	-	2	6.7	28	93.3	-
	Second	-	-	-	-	-	-	
	Third and above	-	-	-	-	-	-	
4.	Age of mother in years							χ^2 = 0.852
	<20 yrs	-	-	0	0	5	16.7	d.f = 2
	21 - 30 yrs	-	-	2	6.7	21	70.0	p = 0.722 N.S
	>30 yrs	-	-	0	0	2	6.7	
5.	Educational Status of the Mother							χ^2 = 13.929
	Illiterate	-	-	-	-	-	-	d.f = 2

S. No	Demographic Variables	Inadequate (<50%)		Moderately Adequate (50 – 75%)		Adequate (>75%)		Chi-Square Value
		No.	%	No.	%	No.	%	
	Primary	-	-	2	6.7	2	6.7	p = 0.001
	Higher Sec.	-	-	0	0	15	50.0	S***
	Graduate	-	-	0	0	11	36.7	
6.	Occupation							χ^2 = 1.639
	Homemaker	-	-	0	0	13	43.3	d.f = 1
	Employed	-	-	2	6.7	15	50.0	p = 0.201
								N.S
7.	Type of family							χ^2 = 0.918
	Joint family	-	-	0	0	9	30.0	d.f = 1
	Nuclear family	-	-	2	6.7	19	63.3	p = 0.338
								N.S
8.	Family Income							
	<3000	-	-	-	-	-	-	-
	3000 – 5000	-	-	-	-	-	-	
	>5000	-	-	2	6.7	28	93.3	
9.	Place of residence							χ^2 = 1.071
	Rural	-	-	0	0	10	33.3	d.f = 1
	Urban	-	-	2	6.7	18	60.0	p = 0.301
	Semi urban	-	-	-	-	-	-	N.S
10.	Previous exposure							
	Yes	-	-	-	-	-	-	-
	No	-	-	2	6.7	28	93.3	

***p<0.001, S – Significant, N.S – Not Significant

The table 11 shows that the demographic variable educational status of Mother is statistically significant $p<0.001$ level and the other demographic variables had not shown any statistically significant association with the post test level of knowledge.

The table 11 shows that there was no association with selected demographic variables such as birth weight, gestational age of the baby at birth, age of mother in years, occupation, type of family, place of residence. Only educational status of the mother has significant association. The researcher accepts the research hypothesis.

CHAPTER-V
DISCUSSION

This study was performed to assess the effectiveness of video assisted teaching programme on homecare management of preterm babies among mothers in selected hospitals at Chennai.

A total of 60 mothers of preterm babies were selected. 30 in the experimental & 30 in the control group were selected through convenience sampling technique. Pretest was done by using an interview schedule for both experimental & control group. A video assisted teaching programme was conducted by the investigator for the experimental group. After seven days the post test was done by using the same questionnaire.

The video assisted teaching programme was conducted regarding thermo-regulation, breast feeding, umbilical cord care, immunization, growth & development and prevention of infection. The knowledge has increased with the evidence of post test scores. In this chapter the scores of different aspects of knowledge were analysed and presented.

1) Demographic profile in Table-1 implies that among the 30 samples in experimental group 19(63.33%) were having preterm baby weighing>2000gm, nearly 18(60%) belongs to 36-37 weeks of gestation about 30(100%) first order of birth of preterm baby, 23(76.67%) of mothers belonged to 21-30years, 15(50%) mothers completed their higher secondary schooling, 17(56.67%) were employed, 21(70%) of mothers were from nuclear family system, 30(100%)

mothers belonged to family monthly income of >Rs.5000, 20(66.67%) were from urban area and 30(100%) of mothers are not previously exposed to care of preterm babies.

With regard to the control group 18(60%) were having preterm baby weighing >2000gm, nearly 19(63.33%) belongs to 36-37 weeks of gestation, about 26(86.67%) first order of birth , 21(70%) of mothers belonged to 21-30 years, 18(60%) mothers completed their graduation, 16(53.33%) were home makers, 19(63.33%) of mothers were from nuclear family system, 30(100%) mothers belonged to family monthly income of >Rs.5000, 26(86.67%) were from urban area and 29(96.67%) of mothers are not previously exposed to care of preterm.

The discussion is based on the objectives:

The first objective of this study was to assess the pretest and the post test level of knowledge on homecare management of preterm babies among mothers in experimental and control group.

As shown in the table 2,in experimental group in thermoregulation, 20(66.67%) mothers had inadequate knowledge, 7(23.33%) had moderately adequate knowledge and 3(10%) had adequate knowledge. Regarding breast feeding 24(80%) inadequate knowledge and 6(20%) had moderately adequate knowledge. Regarding immunization 8(26.67%) had inadequate knowledge and 22(73.33%) had moderately adequate knowledge.

Regarding umbilical cord care 18(60.0%) had inadequate knowledge & 12(40%) had moderately adequate knowledge regarding growth and development 24(80%) had inadequate knowledge, 5(16.67%) had moderately adequate knowledge and 1(3.33%)

had adequate knowledge regarding prevention of infection 16(53.33%) had inadequate knowledge, 6(20%) had moderately adequate knowledge and 8(26.67%) had adequate knowledge.

The data showed that majority of the primi para mothers had inadequate knowledge regarding thermo-regulation, breast feeding, umbilical cord care, immunization, growth & development, and prevention of infection.

As shown in the table-4, in control group in thermoregulatation, 25(83.33%) mothers had inadequate knowledge, 2(6.67%) mothers had moderately adequate knowledge and 3(10.10%) had adequate knowledge. Regarding breast feeding 25(83.33%) had inadequate knowledge, 4(13.33%) had moderately adequate knowledge and 1(3.33%) had adequate knowledge. Regarding immunization 17(56.67%) had inadequate knowledge, 6(20.0%) had moderately adequate knowledge and 7(23.33%) had adequate knowledge.

Regarding umbilical cord care 18(60.0%) had inadequate knowledge and 12(40.0%) had moderately adequate knowledge. Regarding growth and development 23(76.67%) had inadequate knowledge, 3(10.0%) had moderately adequate knowledge and 4(13.33%) had adequate knowledge. Regarding prevention of infection 16(53.33%) had inadequate knowledge, 4(13.33%) had moderately adequate knowledge and 10(33.33%) had adequate knowledge.

The data showed that in control group majority of mothers had inadequate knowledge regarding thermoregulation, breast feeding, immunization, umbilical cord care, growth & development, & prevention of infection.

The present knowledge level of mothers of preterm babies indicates that the video assisted teaching programme is essential to improve the knowledge regarding home care management of preterm babies.

These findings were supported by a study conducted by **Niger .j. clin pract (2008),** to asses the knowledge level on growth of preterm babies among 89 mothers at Havana specialist hospital, Nigeria. The study concludes that the knowledge level of mothers regarding growth of preterm babies is inadequate this indicate that the video assisted teaching programe is essential to improve the knowledge regarding home care management of preterm babies.

The second objective of this study was to determine the effectiveness of video assisted teaching on homecare management of preterm babies in experimental and control groups.

The post test was done after a period of seven days using the same self structured multiple choice questionnaire by interview technique for the same group of preterm mothers in experimental and control group.

Table-3 shows that in experimental group thermoregulation 20(66.67) preterm mothers possess adequate knowledge, 5(16.67%) had moderately adequate knowledge & 5(16.67%) possess inadequate knowledge. Regarding breast feeding 25(83.33%) had adequate knowledge and 5(16.67%) had moderately adequate knowledge. Regarding immunization 20(66.67%) had adequate knowledge , 9(30%) had moderately adequate knowledge and 1(3.33%) had inadequate knowledge. Regarding umbilical cord care 19(63.33%) had adequate knowledge, and 11(36.67%) had moderately adequate knowledge. Regarding growth & development 19(63.33%) had adequate knowledge,8

(26.67%) had moderately adequate knowledge and 3(10.0%) had inadequate knowledge. Regarding prevention of infection 23(76.67%) had adequate knowledge, 1(3.33%) had moderately adequate knowledge and 6(20%) had inadequate knowledge.

Over all scores in post test of experimental group, 2(6.67%) had moderately adequate knowledge and 28(93.33%) had adequate knowledge and none of them had inadequate knowledge. This showed that the overall knowledge was increased after the video assisted teaching programme.

Table-5 shows that in control group thermoregulation 21(70%) preterm mothers possess inadequate knowledge, 6(20%)had moserately adequate knowledge and 3(10%)possess adequate knowledge. Regarding breast feeding 27(90%)had inadequate knowledge and 3(10%)had moderately adequate knowledge. Regarding immunization 22(73.33%)had inadequate knowledge, 6(20%)had moderately adequate knowledge and 2(5.67%)had adequate knowledge. Regarding umbilical cord care 23(76.67%)had inadequate knowledge, 5(16.67%)had moderately adequate knowledge and 2(6.67%)had adequate knowledge. Regarding growth and development 24(80%)had inadequate knowledge,4(13.33%)had moderately adequate knowledge and 2(6.67%)had adequate knowledge. Regarding prevention of infection 11(36.67%)had inadequate knowledge, 7(23.33%)had moderately adequate knowledge and 12(40.0%)had adequate knowledge.

Over all scores in post test of control group, 27(90%)had inadequate knowledge 2(6.67%)had moderately adequate knowledge 1(3.3%)had adequate knowledge. This showed that overall knowledge was not increased in the mothers of preterm babies in control group.

Table-10 reveals which was highly significant & paired 't' test value was ($p<0.001$).which indicates that video assisted teaching programme was effective.

In experimental group, the mean post test score was 25.93 with SD 2.63 & in control group the post test mean score was 9.47 with SD 4.18. The calculated "t" value of 18.262 statistically high significance at $p<0.001$ level. This clearly shows that the video assisted teaching on home care management of preterm babies among mother in the experimental group had significantly improved their knowledge in the post test than among the mothers in the control group.

These findings reveal that there was an improvement in the level of knowledge in posttest, which is shows video assisted teaching was effective in experimental group. These findings was supported by a study conducted by **Neelimarani (2009),** to assess the effectiveness of video assisted teaching on kangaroo mother care among 30 B.Sc nursing III year students (18 – 21years) at NIMS college of nursing , Hyderabad. The studty concludes that there was a significant difference in pretest and post test knowledge score of B.Sc nursing III year students. Hence it shows that video assisted teaching was effective

The third objective of this study was to find out the association between the level of post test knowledge scores on home care management of preterm babies with selected demographic variables between experimental .

In table-11, there was an association between the level of knowledge & educational status of the mother ($p<0.001$). When the educational status of the mother increases, it helps the mother for easy understanding and promotes adequate preterm care.

There was no association between the knowledge & other variables like, birth weight gestational age of the baby at birth, order of preterm, age of the mother, educational status of the mother, occupation, type of family, family income, place of residence, previous exposure of caring preterm baby.

The overall finding showed that the video assisted teaching programme for preterm mothers was effective in selected hospitals at Chennai. This type of educational programmes could bring about a change in the knowledge of preterm mothers & create awareness in caring their preterm babies.

The findings was supported by the result of the study conducted by **JOSHA (2010)** regarding the demographic variables and knowledge of mothers of preterm babies in a project area of urban east india the result showed that educational status of the mothers were significantly associated with adequate knowledge of breast feeding for the preterm babies.

This study accepts the assumptions which was formulated at the beginning of this study.(i.e).

1) The mothers of preterm babies have inadequate knowledge regarding homecare management of preterm babies.

2) The mothers of preterm babies gain adequate knowledge after the video assisted teaching programme.

3) The knowledge of mothers of preterm babies was influenced by their demographic variables like educational status of the mother. The birth weight, gestational age of the baby at birth, order of preterm baby, age of mother, occupation, income, type of family, family income, place of residence, previous exposure to preterm care are not significant.

CHAPTER-VI
SUMMARY, FINDINGS AND RECOMMENDATION

This study was a Quasi experimental study to assess the effectiveness of video assisted teaching programme on home care management of preterm babies among mothers in selected hospital at Chennai.

This study was conducted from 04.06.2011 to 15.07.2011 in KKCTH at Nungambakkam and Dr.Mehta's hospital at Chetpet in Chennai.

A total number of 60 mothers of preterm babies-30 from KKCTH as experimental group & 30 from Dr.Mehta's hospital as control group were selected by using convenience sampling technique. The knowledge of the mothers of preterm was assessed by using an self structured questionnaire, before and after the video assisted teaching programme. Same questionnaire was used to conduct pretest and post test on the same samples. The time period between the pretest and post test was one week.

The tool consist of two sections:

Section I: - Demographic Variable includes two components the baby and the mother.

Part-A: Demographic variable for preterm baby consist of age of the baby, weight of the baby and order of birth.

Part-B: Demographic variable for mother consists of age of the mother, educational status of the mother & father, occupation, income of the family, type of

family, place of residence and previous knowledge of mothers about homecare management of preterm babies.

Section II:- The interview Schedule on homecare management of preterm babies was conducted by using self structured questionnaire

MAJOR FINDINGS OF THE STUDY

1) In the pretest 27(90%) mothers of preterm babies possess inadequate knowledge regarding homecare management of preterm babies in experimental group.

2) In the post test nearly 2(6.67%) preterm mothers possess moderately adequate knowledge and 28(93.33%) possess adequate knowledge in experimental group. The statistical analysis of post test showed significant increase in the knowledge**.**

3) In relation to effectiveness of video assisted teaching programme the pretest mean score was 10.20 and the post test mean score was 25.93 and hence the calculated 't' value is 15.402 was highly significant which shows improvement statistically on knowledge on preterm babies at $P<0.001$ level.

4) In the pretest 27(90.0%) mothers of preterm babies possess inadequate knowledge regarding homecare management of preterm babies in control group.

5) In the post test nearly 27(90%) preterm mothers possess inadequate knowledge, 2(6.67%) possess moderately adequate knowledge and 1(3.33%) possess adequate knowledge in control group. The statistical analysis of post test showed there is no significant increased in the knowledge.

6) In relation to effectiveness of video assisted teaching programme the pretest mean score was 9.27 and the post test mean score was 9.47 and hence the calculated 't' value is (-1.989) was no significant which shows there is no improvement in knowledge of mothers on home care management of preterm babies.

NURSING IMPLICATIONS

NURSING ADMINISTRATION

1) The Nurse can inculcate health education in an effective manner on home care management of preterm babies among mothers by assessing the knowledge level of the mothers.

2) The nurses are in a position to impart knowledge to the mothers of preterm babies in the hospitals regarding mortality and morbidity rates, because the preterm babies are at a high risk for infections.

NURSING PRACTICE

1) The mothers in the family and community can be benefited by video assisted teaching.

2) The information about preterm babies helps to promote good health of the baby & to prevent the mother from false practices. False beliefs and practices like application of turmeric powder in umbilical cord, avoidance of colostrum and administration of sugar water are followed by the mothers in this modern society.

So awareness among society and postnatal mothers should be created by health care personnels by conducting health camps, role play and puppet shows.

3) To prevent infections in preterm babies the general public health nurse can provide video assisted teaching to the public.

NURSING EDUCATION

1) A planned discussion programmes, and debates can be conducted regarding home care management of preterm babies.

2) Nursing students should concentrate in mothers of preterm babies and promote awareness in preterm care to reduce mortality rate.

NURSING RESEARCH

1) Replication of this study in a modified way will provide more facts relating to the home care management of preterm babies.

2) The effectiveness of video assisted teaching improves the knowledge, practice and attitude among mothers of preterm babies. This study can be a baseline for futher studies to build upon.

RECOMMENDATIONS FOR FURTHER STUDY

- A Comparitive study can be done between the mothers in any two hospital.
- A similar study can be conducted on the mothers of newborn babies.
- A comparative study can be done between primi para and multi para mothers.

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